



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

H.A

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/604,189	06/30/2003	Michael D. Bowman	03-0431	1188

64722 7590 08/08/2007  
OSTRAGER CHONG FLAHERTY & BROITMAN, P.C.  
570 LEXINGTON AVENUE  
FLOOR 17  
NEW YORK, NY 10022-6894

EXAMINER
----------

PARRIES, DRU M

ART UNIT	PAPER NUMBER
----------	--------------

2836

MAIL DATE	DELIVERY MODE
-----------	---------------

08/08/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/604,189	<b>Applicant(s)</b> BOWMAN ET AL.	
	<b>Examiner</b> Dru M. Parries	<b>Art Unit</b> 2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 11 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,3-6,8-19 and 21-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-6,8-19 and 21-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |                                                                                                            |                                                                                         |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                           | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments filed June 11, 2007 have been fully considered but they are not persuasive. In response to applicant's argument that Lacy is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, the Examiner agrees that Lacy is not in the field of applicant's endeavor, however, Lacy solves the particular problem of how to distribute power in a load control system (i.e. operating loads in response to power extraction limit and current conditions). Also, Soucy (the main reference) teaches a system with power regulation in an aircraft, however doesn't teach how to efficiently distribute power (the problem), but Lacy solves that problem with his method of distributing power. The apparent reason to combine these references is so that the engine can supply power to as many loads as possible and to make sure that the engine never exceeds the output capacity, which could lead to malfunction or overheating of the engine.

2. Regarding the Applicant's assessment of the Lacy reference, the Examiner points out that Lacy does make a distinction between which loads are of primary importance: the primary loads in Lacy are the uncontrolled loads (18, the ones that are always being supplied with power), and the secondary loads (i.e. the direct and indirect loads of Soucy) are the controlled ones (16). Lacy teaches a priority scheme that makes a distinction between which secondary loads are of primary or higher importance (Col. 5, lines 56-64). Therefore, Lacy DOES make a distinction

between which loads are of higher importance. The Applicant's assertion that Lacy's priority scheme of Fig. 3 may be different than that of Fig. 2 is moot. Also, Lacy teaches a system where the controller always knows how much power is demanded out of each load (primary and secondary) and therefore knows the combined power demand of the secondary loads, and how much power is being consumed by each load and based on this knowledge determines a power extraction limit for the secondary loads and makes sure to not exceed it ("secondary power extraction", "current operating conditions", and "secondary power extraction limit (power limit on controlled loads as a group)" – Abstract and Col. 4, lines 32-44). It is inherent that Lacy determines the combined power demand of the secondary loads to determine if the power extraction limit is exceeded. Based on the power consumed by the primary loads, the secondary power extraction limit is varied and is monitored by the controller and connects/disconnects secondary loads accordingly (via priority scheme). *To clarify, Lacy teaches a method of controlling power distribution to loads, and the Soucy reference is modified with this method of load control to create a system that controls distribution of power to loads in an aircraft.*

3. Regarding the motivation to combine these references, Soucy teaches a power management system but fails to explicitly teach how the controller will control the system to work efficiently. Therefore, this would give one of ordinary skill in the art the motivation to search for efficient methods of power management. While searching for efficient methods of power management, one would come across the Lacy reference and would be motivated to implement this method of power management into Soucy's invention to create an efficient system where one could power as many loads as safely possible. The fact that Lacy's invention, as a whole, isn't suited for use in an aircraft is moot; since Soucy teaches power management in

Art Unit: 2836

an aircraft, and the only thing being modified using Lacy's invention is the method of power management to loads.

4. Regarding the Bushell reference being non-analogous art, the Bushell and Soucy references are directed toward aircraft electrical systems, and Bushell teaches a type of load being powered in an aircraft electrical system. Therefore, Bushell is analogous art. It would have been obvious to one of ordinary skill in the art at the time of the invention to implement a light system as one of the loads in Soucy's aircraft electrical system for providing external aircraft lighting needed to best utilize night vision systems.

5. Regarding the term "secondary loads", since no specific definition was given to the term "secondary load" in the specification, the Examiner gave this term its broadest reasonable interpretation. Also, Lacy does distinguish between two different types of loads based on the way they are treated (uncontrolled and controlled loads), and therefore one of ordinary skill in the art could reasonably say that Lacy teaches primary and secondary loads.

6. Applicant's arguments, see page 9, filed June 11, 2007, with respect to claim 3 have been fully considered and are persuasive. The 112 rejection of claim 3 has been withdrawn.

#### ***Claim Objections***

7. Claim 24 is objected to because of the following informalities: the preamble discusses "A method according to claim 23...", however, Claim 23 is an apparatus claim. Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1, 3-6, 8-19, and 21-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Soucy (6,476,510), Bushell et al. (6,011,493), and Lacy (6,510,369). Soucy teaches a power management system for an aircraft. He teaches plurality of secondary loads (direct - generator, indirect - load, Fig. 1), at least one flight condition sensor (engine speed sensor), and a microprocessor-based (Col. 6, lines 53-59) controller (fuel supply controller & governor) coupled to the plurality of loads and the sensor. Soucy doesn't explicitly teach the types of loads being powered, nor how the controller will control the system to work efficiently. Bushell teaches one of the secondary electrical loads being powered in an aircraft being a lighting system. It would have been obvious to one of ordinary skill in the art at the time of the invention to have one of the indirect secondary electrical loads in Soucy's invention be the lighting system of the aircraft, since Bushell teaches a lighting system being one of the loads powered by an aircraft and Soucy's fails to teach specific loads being powered and for providing external aircraft lighting needed to best utilize night vision systems. Lacy teaches a system with a controller and primary (uncontrolled residential) and secondary (controlled residential) loads. Lacy teaches a controller that can determine the secondary power extraction, current operating conditions and secondary power extraction limit and can operate the plurality of secondary loads in response to the secondary power extraction and limits. (Abstract, lines 7-12) The controller, while determining current operating conditions determines the primary power extraction (power output to uncontrolled residential loads). Lacy also teaches the controller operating the secondary loads in priority (Col. 5, lines 56-64). He also teaches the controller limiting the

Art Unit: 2836

operation the secondary loads when the power extraction is greater than the limit (Col. 4, lines 1-14). (Col. 2, lines 59-67; Col. 3, lines 28-36; Col. 4, lines 32-44) It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate Lacy's method of power distribution into Soucy's invention so that the engine can supply power to as many loads as possible in the safest possible way, and to make sure that the engine never exceeds its output capabilities which may lead to malfunction. By implementing Lacy's method it allows Soucy's aircraft engine to satisfy power consumption requirements for an increased number of secondary electrical loads, when Soucy's direct power secondary electrical loads have a combined total power consumption level that is greater than that of the rated maximum secondary power extraction of the aircraft engine.

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dru M. Parries whose telephone number is (571) 272-8542. The examiner can normally be reached on Monday -Thursday from 9:00am to 6:00pm. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry, can be reached on 571-272-2800 x 36. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

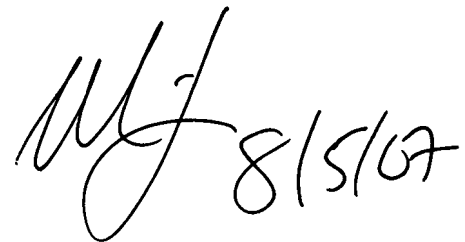
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

Art Unit: 2836

system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DMP

8-3-2007

A handwritten signature in black ink, appearing to be 'MS', followed by the date '8/5/07'.

**MICHAEL SHERRY**  
**SUPERVISORY PATENT EXAMINER**